## WHAT IS CLAIMED IS:

- 1. A process for the preparation of styrene comprising dehydrating gas phase 1-phenylethanol at elevated temperatures in the presence of a dehydration catalyst, in which the dehydration catalyst comprises shaped alumina catalyst particles having a surface area (BET) of from 80 m<sup>2</sup>/g to 140 m<sup>2</sup>/g and a pore volume of more than 0.65 ml/g.
  - 2. The process of claim 1 in which the alumina catalyst is prepared from pseudo-boehmite.
  - 3. The process of claim 1 in which the catalyst has a pore volume (Hg) of from 0.75 ml/g to 0.85 ml/g.
- 1 4. The process of claim 3 in which the alumina catalyst is prepared from pseudo-boehmite.